

PROCEEDINGS  
of the  
PACIFIC COAST ENTOMOLOGICAL SOCIETY.

The 30th regular quarterly meeting of the Society was held on the evening of Nov. 21st, 1908, at the Hotel Manx.

President Van Dyke in the Chair. Minutes of the two preceding meetings were read and approved.

The following members were present:-

Pres. Van Dyke	Edw. Ehrhorn	Chas. Fuchs
J. G. Grundel	Percy Baumberger	James Cottle
J. C. Huguenin	F. W. Nuenmacher	F. X. Williams
Miss Julia Wright	Dr. F. E. Blaisdell	Wm. H. Lange
Walter Topp		

The following guests were present:-

Dr. Carroll Fox	Mrs. J. Cottle	Mrs. F. E. Blaisdell
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The Treasurer then read his report.

Mr. J. Cottle reported his trip to San Diego, stating that he took many *Hemileuca electra*. The males fly early and the females about 2 p.m. and deposited their eggs on the wild Buckwheat (*Eriogonum*). He spoke of his enjoyable meeting with Fields and Ricksecher of San Diego; Prof. Fall, Dr. Fenyer and Grinnell, as well as Clemens, a Lepidopterist, all of Pasadena; Mr. W. S. Wright of San Bernardino.

Mr. Ehrhorn spoke on Horticultural Quarantine against insect pests. California first made laws in 1882. Fruit industry began to spread and the discovery of the Cottony Cushion scale (*Icerya*). The U. S. Entomologist appointed James Lick inspector, and also came to this Coast and worked on the above pest. An Australian parasite was discovered and they ~~discovered~~ decided to send Albert Koebele to get it and he brought back *Novius cardinalis* (*Coccinellidae*).

The pernicious San Jose scale (*Aspidiotus perniciosus*) became severe on deciduous trees and plants, for 10 years a sheep dip was used to fight it. Parasites were discovered. About this time Quarantine was established and laws drawn up and officers appointed. All transportation Companies are obliged to notify the authorities upon their arrival with plants, etc. On steamers from the Orient the passengers have their baggage examined; if fruit is found it is destroyed; if plants, they are passed on and red-tagged; if infested they are either destroyed or fumigated. In large shipments, as for nurseries and responsible persons, the shipments are allowed to be taken to the yards and there treated. Whether parasites are found or not the plants are fumigated before they are allowed to go. If the parties are not responsible, plants are treated before they are allowed to go from the Quarantine Station.







In case of imported scales, - if it was not for the parasites the country would be over-run with them. There are no parasites known for the Red Scale (*Aspidiotus aurantii*) which is an Australian scale, and an expensive method of fumigation is resorted to. An effort is being made to get parasites for all. The early settlers brought over our first pests. The Hessian Fly (*Diplosis tritici*) was first brought from Germany in straw.

The Elm Beetles (*Galeruca xanthomelaena* et *californiensis*) are very destructive to the Elms in the east. One of the worst pests in California is the Codling Moth (*Carpocapsa pomella*). There was an exhibition in 1849 - 50 and a producer wanted to compare apples of California with those of the East. Eastern apples were brought in and were wormy and this is the history of the introduction of the Codling Moth. The Eucalyptus was raised from seed when that industry began. There are no pests for it, but in their native country - Australia - they are abundant, scales and borers. There is a growing demand for the wood, and care must be used or its pests will be introduced.

Hawaii is very careful about pests. The country most strict is Algiers. The Sea Coast is most protected, the interior less so; country borders are not protected and there is danger of pests being brought in.

Mr. F. V. Nunenmacher stated that 600.00 of Eucalyptus seedlings had been brought in several years ago and as a result the parasites are here. He mentioned the Live Oak pest, *Phryganidia Californica*, and that it was extending its ravages to the Acacia, and was continually spreading. The pupa is light colored and that he considered it introduced. Other members took exception to this view, considering it a native species.

Dr. Van Dyke stated that the spread is probably due to the fact that the small birds are being killed or driven off by the small boys with guns. In the Golden Gate Park where the birds are protected, the parasites are few; just beyond the Park limits the Oak Trees are denuded.

Dr. Blaisdell stated that he had collected *Phryganidia* 30 years ago at Poway, San Diego Co., Calif. It there infested the Live Oak.

Dr. Carroll Fox then gave an interesting talk on the campaign against Fleas, as follows:-

The old classification of infectious diseases into contagious, non-contagious and miasmatic, or disease contracted by direct contact, airborne, waterborn and soilborn, is fast becoming obsolete, since we have learned that insects play such an important part in carrying diseases. There are six diseases which are important to the National Quarantine Officer, - typhus fever, small pox, yellow fever, cholera, plague and leprosy. Of these, two certainly are due to the bite of an insect, viz. plague, being due to the bite of a flea, and yellow fever, due to the bite of a mosquito. Besides these diseases, it has been found that sleeping sickness, trypanosomiasis and surra are due to the bite of a fly.







The *Culex* mosquito is responsible for filariasis and dengue fever. The *Anopheles* mosquito carries the contagion of malarial fever. Rocky Mountain Fever and Texas Fever are both due to the bite of a tick.

The magnificent work of the British Indian Plague Commission has placed beyond a doubt that certain of the fleas carry the contagion of plague. Their experiments can be read in the *Journal of Tropical Medicines*. These experiments were done with four varieties of fleas, the *Leemopsylla cheopis*, the common rat flea of India, the *Ceratophyllus fasciatus*, the common rat flea of San Francisco, the *Otenopsylla felis*, and the *Pulex irritans*. The experiments done with the first flea were all successful. Only two experiments were done with the second flea and both were successful. With the *Otenopsylla felis* they were not able to transmit plague.

We have been studying the rat fleas of San Francisco and have examined about 15,000 and have found that while the Indian Rat flea is very common, the *Ceratophyllus fasciatus* predominates, and as both the experiments with the *Ceratophyllus fasciatus* were successful in India there is no doubt that it may be as active in transmitting the disease in San Francisco as the Indian rat flea is in India.

While studying the rat fleas, we also thought it would be interesting to study about the fleas of the smaller animals found within the boundary line of San Francisco. We have therefore had an opportunity to search for fleas on the large skunk (*Mephitis occidentalis*), one variety of the mole (the *Scapanus californicus*), the pocket gopher (*Thomomys bottae*), the weasle (*Putorius xanthogenes*), the common field mice (*Microtus californicus*), the ground squirrel (the *Citellus beecheyi*), a variety of cotton-tail (*Lepus bachmani*), and besides these have examined fleas from sparrow's nests and from the nest of the brush rat (*Neotoma*) and about 3000 specimens of fleas from man. We have found in all something like 22 different species of fleas, some of them entirely new; some of which have been reported before from the United States and some from British Columbia. The *Microtus* alone has furnished four distinct varieties, the *Ceratophyllus telchnum*, a *Hystrihopsylla*, which is probably the *dippei*; an *Odontosyllus*, probably identical with the *charlottensis* and a *Ceratophyllus* which is entirely new. The sparrow's nests furnished a variety which resembles the *Ceratophyllus gallinae*, but is a distinct species and has been described in the *Entomological News*, under the name of *Ceratophyllus niger*. From the mole a flea was obtained representing a new genus, which will also appear in the *Entomological News*, under the name of *Corypsylla ornatus*.

The ground squirrel has furnished constantly two other varieties of fleas, the *Ceratophyllus acutus*, and the *Hoplopsyllus anomalus*. From the rabbit we have gotten a *Hoplopsyllus* and a *Spilopsyllus* which I am at present identifying. The brush rat's nest furnishes four varieties of fleas, the *Hystrihopsylla dippei*, the *Ceratophyllus sexdentatus* and one specimen of the *Odontosyllus*







charlottensis and one female specimen of a flea with a double spermatheca, which I am unable to identify, but which I believe is new. From the weasle we have gotten the Ceratophyllus wagneri. The gopher has furnished constantly the Ceratophyllus ignotus, while on the skunk we have not found any characteristic fleas, but have found as a constant parasite, the Pulex irritans, or ordinary human flea. As an interesting fact, we have found on several occasions, the squirrel fleas on the rats. This is particularly interesting on account of the finding of plague among the squirrels in certain parts of California.

The Doctor then advised persons collecting fleas, to keep all those taken from any one animal separate, with the proper data attached.

Dr. Fox stated that he was depositing types and named specimens in the California Academy of Sciences.

Mr. Murrhorn stated that he always has a small vial or two on hand, in which he places the specimens and then puts it into an envelope upon which he writes the data. Fleas should be preserved in 70 per cent alcohol.

Mr. Fuchs gave an outline of the work done at Berkeley in the fight against pests.

Mr. F. W. Nunenmacher talked about his trip to Arizona, also the Coleoptera from Goldfield, Nevada.

Mr. Murrhorn exhibited a collection of coccidae and Lucrossus or white-fly.

Mr. James Cottle a number of Hemileuca eleotra from San Diego.

Mr. Nunenmacher a box of Orthoptera taken in Arizona, also two boxes of Coccinellidae.

Mr. F. W. Williams a box of Moths, Butterflies and Grasshoppers.

Mr. Walter Topp the Denton Bro's mounts for Lepidoptera.

Mr. Percy Baumbarger a box of Hymenoptera and another of Parasitica.

Refreshments were served. Adjournment.

F. E. Blaisdell Sr., Sec.

The 31st regular quarterly meeting was held on the evening of Feb. 27th, 1909, at Thompson's Cafe, O'Farrell St., San Francisco. President Van Dyke in the Chair. Minutes of the preceding meeting were read and approved.

The following members were present:-

Pres. Van Dyke	J. G. Grundel	F. W. Nunenmacher
J. C. Hagenin	F. W. Williams	Chas. Fuchs
Percy Baumbarger	Edw. Murrhorn	Miss Julia Wright
F. E. Blaisdell, Sr.	Walter Topp	Wm. H. Lange
James Cottle	Leon Ruiner	







The following guests were present:-

Dr. Carroll Fox	L. R. Reynolds	M. B. Mitzmain
Mrs. J. Cottle	Mrs. Leon Muirer	Mrs. F. E. Blais-

The Treasurer's report was then read.

Dr. Carroll Fox, L. R. Reynolds and Maurice B. Mitzman were elected to membership.

Pres. Van Dyke asked the members intending to read papers to send in titles before hand so that the program could be arranged before the meeting. A copy should also be given to the Secretary to be filed in the proceedings.

Mr. F. W. Munermacher then read the following epitome on the progress of the study of the Coccinellidae.

Mr. G. R. Grotch gives in his Revision of the coccinellidae of 1870, 137 genera and 1341 species. In his Revision of the U. S. of 1874, 3 more genera are added and 14 species. From 1885 to 1905, J. Weise adds 18 genera, 326 species, and 61 varieties. From 1892 to 1896, Blackburn of Australia in his Rev. I, adds 7 genera, 93 species and 7 varieties. In 1895, Dr. George Horn added one genus and 30 species. In 1896 (?) G. Lewis added 2 genera, and 18 species, all from Japan. From 1899 to 1902, Col. Thos. L. Casey added 16 genera and 238 species, also 10 varieties. From 1903 to 1906 Mr. C. W. Leng added one genus, 3 species and 3 varieties. In 1905, Mr. C. Schaeffer added 2 species. In 1905 Prof. H. F. Wickham added one species. In 1907, Dr. A. Sicard added one genus, 42 species, and 5 varieties. In 1899 Dr. F. E. Blaisdell added one species. Prof. H. C. Fall added 10 species. Mr. A. M. Lea of Tasmania added 4 genera, 20 species and several varieties. The grand total being 192 genera, 2028 species and 85 varieties. To describe the above it took 129 authors and besides the above Mr. Gorham described several.

Mr. J. G. Grundel reported his recent visit to the Tahiti Islands, a few Coleoptera, four species of Coccidae and the "White-fly". Three species of Coccinellidae, one being coccinella abdominalis, and some other beneficial species, were among those taken. The cocoa-put weevil is very injurious there. A small ant seemed to be very destructive to other insects of the Islands. Coccidae were very abundant on plants around the settlements, especially on the imported plants. One species of Catocala and a large Sphinx, a large spider is abundant there. It feeds on mosquitoes. A small Lizard was also busy feeding on insects. In the dense forests he found very few things, even after careful search; a few moths and a Satyrus?

There were originally 550 species of Native plants. Now there are over 2000 with the introduced species.

Mr. Wurhorn exhibited the scales brought back by Mr. Grundel.

A discussion on the distribution of insects by the Natives and commerce then followed. The discussion was particularly concerned in such insects as the Coccidae and Mealy-bugs.

Mr. L. R. Reynolds stated that exhaustive collecting is







a good idea, as the native fauna of most Islands is being rapidly destroyed, or obscured by the introduction of other species.

Dr. Carroll Fox stated that species of Sarcopsyllidae were parasitic on the Flea, 6 of these mite-like organisms were found on a single individual. These parasites are so microscopic that 20 or 30 could easily get on a single flea.

Dr. Van Dyke stated that the early stages occur in rats' nests and that they run over the ground in the larva stage, and finally get on their hosts.

Mr. Ehrhorn asked the members to collect Myriopoda and turn them over to him to be forwarded to Dr. Sylvester, who is an European specialist on the order.

Dr. Blaisdell reported that his monograph on the Eleodini of the U. S., would soon be issued, as Bulletin No. 63 of the U. S. National Museum, 519 pages, 13 plates and 8 text figures and that it had been 8 years in preparation.

Eschscholtz's Atlas was exhibited by Pres. Van Dyke.

Mr. Nunenmacher exhibited a box of Lepidoptera from Nevada.

Mr. Grundel a lot of Cocoons of *Attacus ceanothi* and *cecropia*, many were hybrids.

Mr. L. E. Ricksecker's lists of Coleoptera and Lepidoptera collected at San Diego is appended for those who desire to obtain many good things.

Refreshments and adjournment.

F. E. Blaisdell, Sec.

LIST of COLEOPTERA. L. E. RICKSECKER, SAN DIEGO, Mar. 1909

27	<i>Cicindela latesignata</i>	.10	5432	<i>Canthon simplex</i>	.03
27a	" var. <i>temuicincta</i>	.10	5684	<i>Serica mixta</i>	.05
33a	" <i>oregona</i>	.08	5859	<i>Cyclocephala longula</i>	.10
41c	" <i>signoidea</i>	.05	5865	" <i>dimidiata</i>	.05
35	" <i>hirticollis</i>	.05	5869	<i>Ligyris gibbosus</i>	.03
52	" <i>Gabbii</i>	.15	5920	<i>Cremastochilus Schaunin</i>	.25
63	" <i>haemorrhagica</i>	.10	6151	<i>Crossidius testaceus</i>	.15
63a	" var. <i>Pacifica</i>	.10	6326	<i>Leptura 6-spilota</i>	.15
139	<i>Calosoma semilaeve</i>		6535	<i>Saxinis laucia</i>	.05
517	<i>Pterostichus Isabellae</i>	.05	6627	<i>Cryptocephalus surcus</i>	.05
1006	<i>Chilaenius cunatilis</i>	.08	6742	<i>Chrysochus cobaltinus</i>	.03
2055	<i>Aleochara bimaculata</i>	.03	7063	<i>Microthopala rufolineata</i>	.08
	<i>Dactylosternum cacti</i>	.10	7135	<i>Euryteton convexicollis</i>	.05
2060	<i>Maseochara valida</i>	.05	7191	<i>Emmenastus longulus</i>	.03
	<i>Apheloglossa rufipennis</i>	.05	7223	<i>Phloeodes diabolus</i>	.05
	casey				
2145	<i>Belonuchus ephippiatus</i>	.05	7348	<i>Microschestia inaequalis</i>	.05
2641	<i>Physetopus glossulus</i>	.10	7370	<i>Asida obsoleta</i>	.05
3457	<i>Hololepta cacti</i>	.08	7376	" <i>angulata</i>	.10
3459	" <i>vicina</i>	.05		<i>Eleodes omisa</i> , <del>Blaisdell</del>	.10
3561	<i>Paromalus consors</i>	.05		" var. <i>pygmaea</i>	.05



a good idea, as the native fauna of these islands is being rapidly  
destroyed, or obscured by the introduction of other species.  
Dr. Garrell Fox stated that species of *Stenopodidea* were  
parasitic on the flies, & of these mite-like organisms were found on  
a single individual. These parasites are so microscopic that so  
far so could easily get on a single fly.  
Dr. Van Dyke stated that the only species occur in water  
near the shore, but they run over the ground in the larva stage, and  
finally get on their hosts.  
Mr. Garrell Fox asked the members to collect *Stenopodidea* and  
then then over to him to be forwarded to Dr. S. Van Dyke, who is an  
European specialist on this order.  
Mr. Garrell Fox showed his photograph on the floor-  
plans of the U. S. ... would not be issued, as ... of the  
U. S. National Museum, his request is placed and a text figure and  
that it had been a matter of protection.  
Each individual's name was exhibited by Prof. Van Dyke.  
Mr. Garrell Fox exhibited a box of *Stenopodidea* from Nevada.  
Mr. Garrell Fox a lot of specimens of *Stenopodidea* and  
*Stenopodidea*, they were hybrids.  
Mr. L. E. Ricker's list of *Colobopoda* and *Stenopodopoda*  
collected at San Diego is appended for those who desire to obtain  
more good things.  
Retirements and arrangements.

P. E. Blaisdell, Sec.

LIST OF COLLECTORS, SAN DIEGO, MAR. 1903

37	<i>Stenopodidea lateralis</i>	10	3433	Canyon simplex
37A	" "	10	3434	var. <i>simplex</i>
37B	" "	10	3435	<i>Stenopodidea simplex</i>
37C	" "	10	3436	" "
37D	" "	10	3437	" "
37E	" "	10	3438	" "
37F	" "	10	3439	" "
37G	" "	10	3440	" "
37H	" "	10	3441	" "
37I	" "	10	3442	" "
37J	" "	10	3443	" "
37K	" "	10	3444	" "
37L	" "	10	3445	" "
37M	" "	10	3446	" "
37N	" "	10	3447	" "
37O	" "	10	3448	" "
37P	" "	10	3449	" "
37Q	" "	10	3450	" "
37R	" "	10	3451	" "
37S	" "	10	3452	" "
37T	" "	10	3453	" "
37U	" "	10	3454	" "
37V	" "	10	3455	" "
37W	" "	10	3456	" "
37X	" "	10	3457	" "
37Y	" "	10	3458	" "
37Z	" "	10	3459	" "
37AA	" "	10	3460	" "
37AB	" "	10	3461	" "
37AC	" "	10	3462	" "
37AD	" "	10	3463	" "
37AE	" "	10	3464	" "
37AF	" "	10	3465	" "
37AG	" "	10	3466	" "
37AH	" "	10	3467	" "
37AI	" "	10	3468	" "
37AJ	" "	10	3469	" "
37AK	" "	10	3470	" "
37AL	" "	10	3471	" "
37AM	" "	10	3472	" "
37AN	" "	10	3473	" "
37AO	" "	10	3474	" "
37AP	" "	10	3475	" "
37AQ	" "	10	3476	" "
37AR	" "	10	3477	" "
37AS	" "	10	3478	" "
37AT	" "	10	3479	" "
37AU	" "	10	3480	" "
37AV	" "	10	3481	" "
37AW	" "	10	3482	" "
37AX	" "	10	3483	" "
37AY	" "	10	3484	" "
37AZ	" "	10	3485	" "
37BA	" "	10	3486	" "
37BB	" "	10	3487	" "
37BC	" "	10	3488	" "
37BD	" "	10	3489	" "
37BE	" "	10	3490	" "
37BF	" "	10	3491	" "
37BG	" "	10	3492	" "
37BH	" "	10	3493	" "
37BI	" "	10	3494	" "
37BJ	" "	10	3495	" "
37BK	" "	10	3496	" "
37BL	" "	10	3497	" "
37BM	" "	10	3498	" "
37BN	" "	10	3499	" "
37BO	" "	10	3500	" "



3583	Saprinus lugens	.03	7337	Eleodes grandicollis	.10
	Saprinus		7330	" femorata	.25
	Saprinus		7343	" acuticauda (2 forms)	.05
3672	Garpophilus hemiterus	.03	"	" var. laticollis (2 forms)	.05
3379	Amphicyrta dentipes	.05	"	neotomae	.25
4515	Melanaetes densus	.10	7338	" gigantea	.10
	Acanthodera Fenyessii	.25	7374	Eulabis pubescens	.05
4817	Pyropyga fenestralis	.03	7382	Amphidora nigropilosa	.03
4846	Microphotus angustus	.03	7385	Gratidus osculans	.05
4846	Telephorus consors	.05	7387	Stenotrichus rubripes	.03
7398	Coelocnemis dilaticollis	.03	7436	Blapstinus brevicollis	.10
7437	Blapstinus lecontei	.03	7478	Cynaenus depressus	.10
8026	Nemognatha lutea	.10	8076	Epicauta atrata	.05
8128	Cantharis melaena	.10	8322	Aranigus Fulleri	.05
8974-12335	Scyphophorus yuccae	.05	9874	Scyphophorus robustior	.20
11153	Baris compacta	.10			

To members of P. C. Ent. Soc. 50, disct. on orders of ten dollars and upwards.

Lepidoptera Collected at San Diego 1902. L. E. Ricksecker			
Price per specimen	♂-♀	in papers, price per specimen	♂-♀
Nathalis iola	.20	Leptodes marina	.12
Argynnis semiraris	.40	Prenes errans	.20
Lemonias chalcodon	.10	Thanaos clitus	.15
" augusta	.20	Satyrus paulus	1.00
" Gabbii	.15		
Chrysobia virgulti	6	Hemileuca electra (spread)	.50-1.00
Catophalis australis	15	Otemocha multifaria (pinned)	.25
Habrodinus grunus	15	Apantesis autholea	.10
Thecla dryope	15	Hydromena custodiata	.15
" saepium	20		
Callophrys dunetorum	10	Hemileuca electra pinned	.30
Thaisalea hermes	.25	Datana robusta inflated larvae	.20
Gaeides gorgon	20		
" Xanthoides	20		
Epidea helioides	6		
Nemodes antiacis	12		
Philotes sonorensis	20		
Rusticus Gattoides	15		
" molissa	6		
" achon	5		
Everes acyntula	12		
Brephidium exilis	5		

L. E. Ricksecker  
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